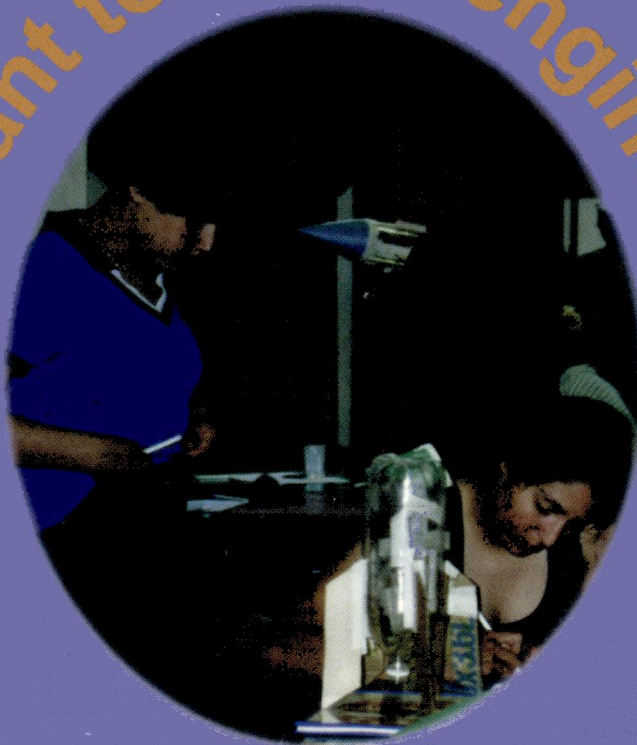


I want to be an engineer!



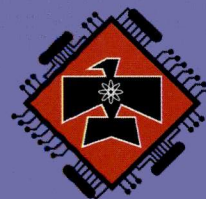
Engineering Education in Canada: A Guide for Aboriginal Students

Second Edition



Concordia
UNIVERSITY

Real education for the real world



**Native Access
to Engineering Programme**
Faculty of Engineering and Computer Science

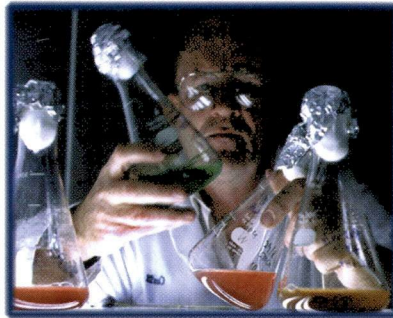


Wouldn't it be cool to...

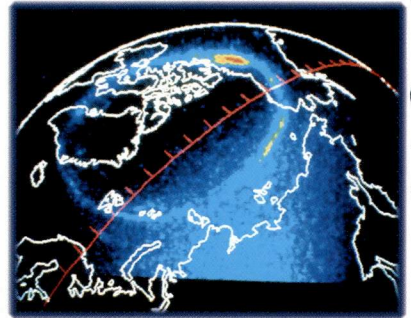
...study muskox?



...make medicine?



...map the aurora?



**If you work hard in school,
there's a world of choices for you.**

You are our future. Good luck!



**The Aboriginal Workforce Participation Initiative (AWPI)
works with Corporate Canada to promote Aboriginal employment.**

For more information, visit:

www.inac.gc.ca/awpi/index_e.html

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Engineering is all around us ... just like it was for our ancestors

The moment you decide to pursue a course of academic study is a significant one. This book is a part of the “tool kit” in making that decision. I am honoured to write this welcome message. I hope the information you find here encourages you to pursue the education and career that I have found very rewarding.

Twenty-six years ago, I decided to enrol in engineering. Until that point, I was confused by all the choices I was told that I had. I was just 17 years old and afraid of making a mistake. I was, and still am, quite a talker, so law school beckoned. My real love was geography, but I was raised with a wide practical streak and I couldn't envision good employment potential. I concluded that I wanted to make concrete contributions, so I enrolled in engineering at the University of Regina.

To gain work experience I joined the Co-op Work/Study Program. I was fortunate to work in research and development, power plant design, natural gas distribution and railway relocation. I learned engineering is all around us and engineers are excellent problem solvers. I came to appreciate the application of the courses we took. The engineers that supervised me were dedicated to my development. That alone had a big impact on me. I thought, “What a profession!”

I completed a Bachelor of Applied Science in Industrial Systems Engineering and have earned my Professional Engineering designation in 5 provinces. After working for others, I now own and operate a consulting engineering firm. Based on the early desire to make concrete contributions and the advice received from Elders, our company vision is to create a legacy in the Aboriginal community.

I'm glad I made the decision to enrol in engineering. An engineering degree allows you to practise engineering and so much more. I solve technical and business problems every day as part of a team of men and women who are dedicated to our Aboriginal clients. Our days are high energy and exciting. We all feel that we are making a meaningful contribution to our communities. My career has exceeded the expectations of the 17 year old.

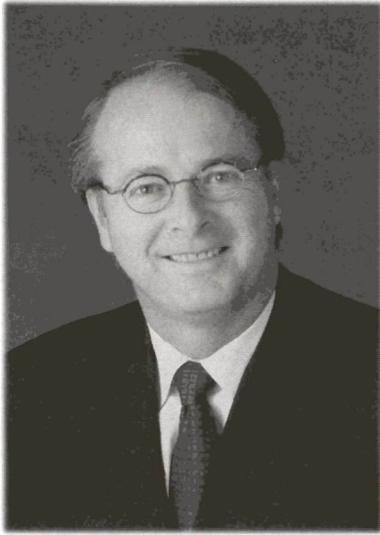
No two life paths are the same. They are as different as we are. If you take advantage of the information in this book and make contact with the schools listed, you will make the right choice for you.

Gary Bosgoed, P. Eng.

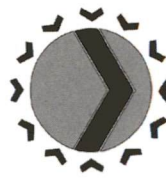
President, Bosgoed Projects

Vice-President, Canadian Aboriginal Science and Engineering Association





**Canadian
Council of
Professional
Engineers**



**Conseil
canadien
des
ingénieurs**

Welcome

Engineering offers a wonderfully diverse and rewarding range of career options that give you the opportunity to make a real difference in people's lives.

Engineers are highly trained professionals who are responsible for work that improves the living standards and health of all Canadians, and respectful of the environment through a commitment to sustainable development. An engineering education provides the knowledge to design products, systems and processes that enhance our quality of life — drinking water systems, waste treatment facilities, affordable housing, transportation, medical technologies, and communications systems including Internet and satellite technologies.

A career in engineering offers a good income, employment stability and public respect. There's no other profession like it.

More than 160,000 licensed engineers work in Canada, including thousands who came here from other countries. As a profession, we strongly believe that the knowledge-sharing and insight we gain by promoting cultural diversity in engineering contribute to Canada's engineering excellence.

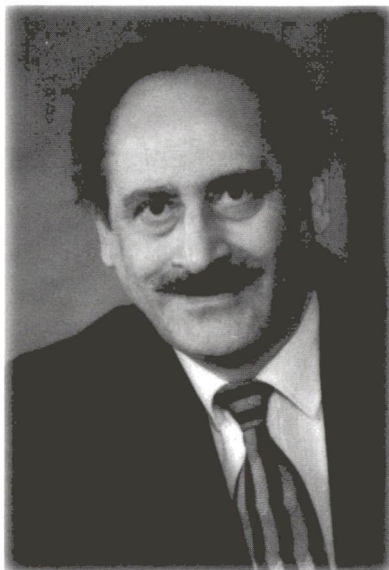
If the information in this guide interests you, I recommend two other Canadian resources where you can find out more about engineering. The National Engineering Week site at www.new-sng.com is a youth-oriented space where you can discover what engineers do and read about Canada's greatest engineering achievements. At www.peng.ca you will find detailed information on how to get a P.Eng. or *ing.*, the licence you'll ultimately need to practice engineering in Canada.

I am delighted that you may be interested in an engineering career. From personal experience I have found engineering a worthwhile challenge that has led me on a meaningful life-journey. It truly is a career you can be proud of.

Pierre Boucher, ing.

President, Canadian Council of Profession Engineers





Concordia
UNIVERSITY

Welcome

Our tradition and mission at Concordia University and in the Faculty of Engineering and Computer Science has always been to develop distinct academic programs, research centres, projects and partnerships which are responsive to community needs. One such initiative is the Native Access to Engineering Programme (NAEP), a project that has expanded our reach far beyond the borders of Montreal and Quebec.

Our NAEP is rather unique. As the only program of its kind in Canada, it serves as a recognized resource centre for Aboriginal communities, engineering faculties and government bodies nationwide. While most access programs provide support for students already committed to pursuing university education, our program opens up the possibilities of engineering to Aboriginal students, like you, who are still in high school. As you face important decisions about school and career, this guide will help you discover the world of opportunity in engineering and computer science.

Of the thousands of engineers in Canada, very few are from First Nations, and yet Aboriginal engineering goes back generations. Your ancestors' creativity and ingenuity developed the igloo, snowshoe and canoe. These innovative creations work so well because they are based on a solid engineering synthesis of scientific ideas. At Concordia, we strongly believe that engineering education offers you the potential to build on the innovative traditions of your peoples, to foster scientific, technological and economic advances for your communities and nations. We also believe that having First Nations students study with us and eventually join the engineering profession will enrich our Canadian engineering traditions.

We sincerely hope some of you will consider engineering either at Concordia or another university. To start, you have to decide if engineering is for you, so read through this guide and consider the possibilities of acquiring the practical tools that will help you shape the lives of generations to come.

Nabil Esmail, PhD, ing., F.C.I.C

Dean and Professor

Faculty of Engineering and Computer Science, Concordia University

Frequently Asked Questions

What is engineering?

Engineers do so many things, this question could have a very long answer. Basically, engineers use concepts in math and science to solve problems creatively. They apply science, which is why engineering is often referred to as applied science. When you make toast in the morning, phone your friend or fly in a plane, you experience the work of engineers first-hand. Moon landings, cellular phones and satellites orbiting through space are possible because of engineers. Engineers are involved with the design, construction and operation of everything from razor blades and microchips to skyscrapers and bridges.

Although technology is advancing rapidly, the underlying scientific theories and principles it is based on are constant. Aboriginal people have been practicing the art of engineering for thousands of years. Building igloos, designing irrigation systems and even travelling across harsh terrain, all require the application of scientific knowledge and, therefore, engineering.

Where do engineers work?

Just about anywhere! Engineers often work at their desks, in factories or in labs at research centres. Certain fields have special areas of work: mining engineers, for example, spend time underground; ocean engineers work in or near the sea; forestry engineers will spend most of their time outdoors.

Are there any Aboriginal engineers?

Yes! There are Aboriginal engineers in Canada, but not very many. In fact, there aren't even close to enough Native engineers to meet the engineering needs of their own communities. Aboriginal engineers work at big companies like Syncrude, Shell, Pratt & Whitney and the federal government. They also work for your local band council, treaty organization or public works department.

Do engineers work with people?

Engineering is actually all about working with and for people. Engineers work for clients, usually in teams with other engineers. Engineers can work with biologists, chemists, city planners, geographers, architects, etc.... This interaction with other fields is absolutely necessary to develop complete solutions to large, complex problems.

Do I have to have good marks in math and science to enter engineering?

Admissions to engineering programs are competitive; there are more applicants than spaces, so the better your grades are the better your chances of admittance. Generally, good to excellent grades are required. Usually, grades of 80% or more in math and sciences are needed for admission.

What other entrance requirements are there?

Generally speaking, a high school diploma with Mathematics, Physics, Chemistry and Biology is required or, in Quebec, a CEGEP diploma with a concentration in pure and applied or health sciences. Although not a requirement for admission into engineering, creativity, rigour, analytical thinking, adaptability, being comfortable with team work and an ability to communicate with others are also helpful qualities. In every case, it is a good idea to check with the educational institution or a guidance counselor about the qualifications necessary for applying to a specific school.



What is co-operative education?

Co-operative Education is a three-way partnership between the university, the student and the employer. The common goal is to develop meaningful and relevant practical opportunities for students, while enriching both the classroom and workplace experience.

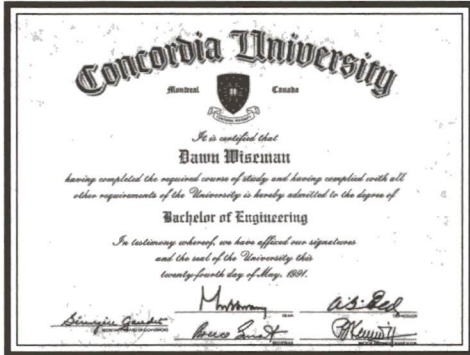
Co-op education combines education at school and education in the workplace through alternate semesters of study and work. The work-term is designed to provide knowledge relevant to the student's academic discipline while the student is paid at a competitive rate. The classroom environment is then stimulated by questions formed in industry and brought back to school; everyone benefits. Co-op students tend to get more from their education and are likely to be more successful in securing employment in their field of study upon graduation. When co-op graduates apply for work, they are serious candidates for any position in their discipline because they already have practical work experience.

Many engineering schools and faculties in Canada offer co-op programs.

What is an internship program?

An internship is a work experience program within a student's field of study that lasts between 12 and 18 months (time varies in each institution). The difference between an internship and co-op is that while co-op involves working terms of 4-6 months spread out over an entire bachelor's degree, an internship is one long work-term which begins after the third year of study has been completed.

Several Canadian engineering schools offer internships as an option for senior students.



What is the difference between getting a B.Eng. or B.App.Sci. and getting an engineering technician's diploma or certificate?

Bachelor degrees in engineering (B.Eng) or applied sciences (B.App.Sci.) are granted to students upon completion of required course work at a university. Engineering technologists get diplomas/certificates and are generally taught at colleges. A bachelor's degree in engineering makes you eligible for professional licensing, while a technician's diploma does not.

What is an accredited engineering program ?

Accredited Canadian undergraduate programs are those that meet or exceed the educational standards required to obtain a professional engineering license in Canada. The curriculum content of each program is analyzed periodically (at least every six years) by a team of professional engineers in order to ensure that it meets the minimum criteria. The accreditation process is managed by the Canadian Council of Professional Engineers (CCPE).

What is the CCPE?

The Canadian Council of Professional Engineers is the national organization of the 12 provincial and territorial associations that regulate the practice of engineering in Canada and license the country's more than 160,000 professional engineers. CCPE helps the associations with details such as engineering education and guidelines on how to get a licence. They want to be sure there are safe standards for engineering work throughout Canada. Because the associations work together, an engineer can easily get a licence to work in another province or territory. CCPE speaks for the engineering profession both nationally and internationally, and educates the public about the vital role engineers play in society.

Can I become an engineer without an accredited degree?

The simplest way to become a professional engineer is to graduate from an accredited undergraduate engineering program and meet your province's licensing requirements. It is, however, possible to become a professional engineer without an accredited degree. The qualifications vary from province to province, but generally the process involves writing a number of exams.

What kind of jobs do engineers get?

Engineers get any number of different jobs. They can be involved in pure or applied research, planning, production, testing, procurement, maintenance, construction etc. in just about any company. Research engineers undertake detailed studies to develop and improve materials, products, techniques and processes. Design engineers prepare designs for the construction of machines, products and structures. Production engineers oversee the manufacture of raw materials into finished products. Test engineers determine life, wear and strength of material and parts. Procurement engineers purchase materials, parts, supplies and service. Construction engineers direct the assembly and installation of structures such as water treatment plants. Computer design engineers design and build software, and produce and maintain equipment

What kind of starting salary can I expect?

Salaries vary according to specialty and province. In 1997, engineers earned an average of \$59,043. with a starting salary between \$35,000 and \$40,000 per year.

How long does it take to become an engineer?

The course leading to a Bachelor's degree in engineering lasts three and a half to four years. Some institutions offer a cooperative plan that allows study semesters to alternate with paid training in industry: these programs take an average of one year longer to complete. But graduating is just the first step. Like doctors and lawyers, engineers must spend a number of years earning their professional qualifications. Depending on the province they live in, candidates must complete three to four years of relevant engineering work experience, write and pass an examination on professional practice, ethics, engineering law and liability, and be proficient in English and/or French.



What does it mean to be a P.Eng or ing.?

In Canada, you must have a licence to be an engineer. Licences are granted by engineering associations in the provinces and territories and give a person the legal right to practise engineering in that province or territory. Professional engineers must follow a code of conduct and ethics, and practise engineering according to laws set out by the province or territory. People who have obtained an engineering licence can use the designation P.Eng. after their name. French-speaking engineers in Quebec and New Brunswick use the term *ing*

Professional Engineering Associations:

Ordre des ingénieurs du Québec

Association of Professional Engineers and Geoscientists of Newfoundland

Association of Professional Engineers of Nova Scotia

Association of Professional Engineers of Prince Edward Island

Association of Professional Engineers and Geoscientists of New Brunswick

Association of Professional Engineers and Geoscientists of Manitoba

Professional Engineers Ontario

Association of Professional Engineers and Geoscientists of Saskatchewan

Association of Professional Engineers, Geologists and Geophysicists of Alberta

Association of Professional Engineers and Geoscientists of British Columbia

Association of Professional Engineers, Geologists & Geophysicists of the Northwest Territories & Nunavut

Association of Professional Engineers of Yukon

Why do most engineers in Canada wear an iron ring on their pinkies?

The Iron Ring is worn on the little finger of the working hand to symbolize an engineer's responsibility to protect the public and environment. The Iron Ring ceremony is overseen by the Corporation of the Seven Wardens, which is independent of both the educational and licensing institutions.



Types of Engineering

The following engineering programs are offered at Canadian engineering schools and faculties.

Aerospace Engineering

Aerospace engineers are responsible for the research, design and production of aircraft, spacecraft, aerospace equipment, satellites and missiles. Work done by aerospace engineers has made such things as speedy mail delivery and moon travel possible. Canadian aerospace engineers designed the Canadarm used on the Space Shuttle and International Space Station.

Agricultural Engineering

Agricultural engineers look for solutions to problems involving the use of plants, animals and the natural environment. In the past, agricultural engineers have developed improvements to crop and livestock production. While this function continues, the scope of practice is widening to include land and resource management, pollution concerns, machinery for growing non-traditional crops, bio-energy development, and value-added processing of biological materials.

Biological and Biosystems Engineering

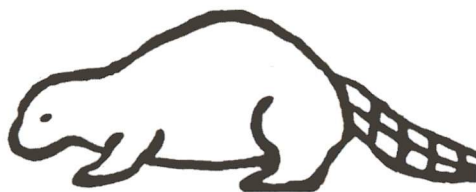
Biological and Biosystems Engineering draw on the biotechnologies found in the food, pharmaceutical, petroleum and textiles industries and combine them with engineering design. Engineers in these areas may develop processes in which microorganisms produce antibiotics more efficiently, or conduct research into how microbes can be used to digest oil spills.

Biomechanical and Biomedical Engineering

Biomechanical and biomedical engineering combine the discipline of mechanical engineering with human anatomy and physiology. Work in this area may include designing prostheses, developing movement systems for people with spinal injuries, and developing equipment for athletes in high-performance sports.

Building Engineering

Building engineers acquire knowledge in the planning, design, construction, operation, renovation and maintenance of buildings, together with an understanding of impacts on the surrounding environment. Building engineers explore all phases in the life cycle of a building. They identify the problems and find appropriate solutions to improve the quality of living within the built environment.



Chemical Engineering

Chemical engineers apply principles of chemistry, mathematics and physics to the design and operation of industrial equipment and methods for the manufacture of chemical products. The fibers in clothing, soaps and detergents, leather, paints and plastics are all designed and produced by chemical engineers.

Civil Engineering

Civil engineering is one of the oldest types of engineering. It involves the design, construction and management of municipal infrastructure, highways, railways, transit systems, airports, harbours, bridges, tunnels and buildings. Civil engineers also ensure the availability of high quality water supply and sewage treatment facilities.

Communications Engineering

Communications engineers plan, analyse, design, implement, operate, test, maintain and manage communications systems and networks. They play a key role in the ongoing development of the Internet and associated technologies.

Computer Engineering

Computer engineers use their knowledge of computer hardware to design, develop and maintain computer systems. They work in a variety of areas, such as microelectronics, telecommunications, power systems and instrumentation.

Construction Engineering

Construction engineers are involved in all aspects of construction projects - from roads and dams to houses and schools. They are responsible for scheduling and planning, and ensuring required equipment and materials are on site. They must also test and evaluate constructed facilities to make sure they meet local, provincial and federal standards.



Electrical Engineering

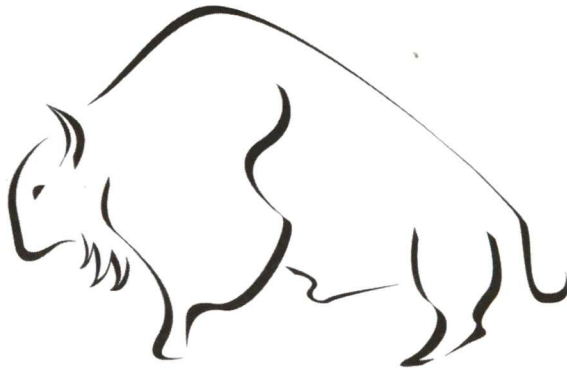
Electrical engineers are involved in the generation or production, transmission, distribution and application of electrical energy: the electricity that lights our homes, helps us cook our food, and powers our machinery. They also make very important contributions to telecommunications, television and computer technology.

Electromechanical Systems Engineering

Electromechanical systems engineering focuses on all the devices which make electrical and mechanical systems work together. People in this field often work for the automotive, power production or airline industries.

Electronic Systems Engineering

Engineers who specialize in electronic systems are concerned with the design, analysis and manufacture of electronic circuits and devices.



Engineering Physics

Engineering physicists rely on a background of physics, math and chemistry coupled with engineering disciplines, such as mechanical or electrical engineering to develop and design products in telecommunications, optics and many other technology-based industries.

Environmental Engineering

Environmental engineers develop feasible solutions to problems affecting the welfare of humans and nature. They work to prevent pollution of the environment by designing systems of air and water quality control, vibration and noise reduction, and hazardous waste disposal. They also work in remediation of contaminated soil, water and air.

Food Engineering

Food engineers apply the concepts and principles of engineering to the conversion of raw food stuffs into safe consumer products of the highest possible quality. They work in the areas of food handling, processing, packaging and distribution.

Forestry Engineering

Forestry engineers study the effects of industrialization on nature, silviculture, hydrology and renewable resources. They are involved in the development of sustainable forestry as well as the design of lumber harvesting and processing equipment.

Geological Engineering

Geological engineers apply geological data, techniques and principles to the investigation of natural materials such as rock, soil and ground water. They determine the suitability of various locations for buildings, dams, highways, airfields, pipelines and tunnels, and are involved in the design of these structures.

Geomatics (Surveying) Engineering

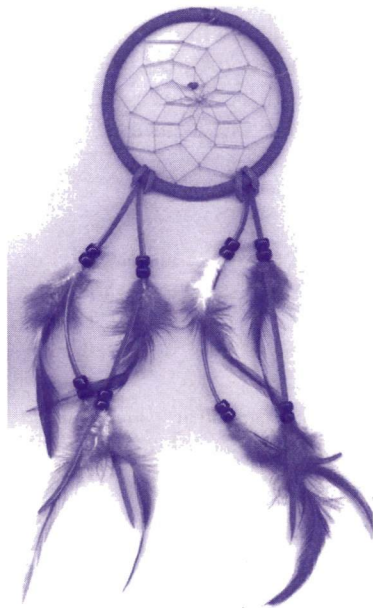
Geomatics engineers collect, display and analyse data about the Earth's surface and its gravity fields for such uses as mapping, legal boundary delineation, navigation and monitoring environmental concerns. Much of their information comes from images provided by a network of satellites orbiting the earth. Geomatics engineers help airplane navigation and position offshore rigs.

Industrial/Manufacturing Engineering

Industrial engineers and manufacturing engineers use their expertise in equipment, material, procedures, human resources and production methods to assist organizations to improve their efficiency, effectiveness and productivity. Industrial engineers are concerned with the management side of operations, while manufacturing engineers focus on the manufacturing process. The broad span of their knowledge allows them to work in almost every type of business, including hospitals and banks.

Integrated/Unified Engineering

Integrated and Unified Engineering are interdisciplinary fields which recognize that the trend in industry is towards diversity and sophistication. Engineers in these two fields follow a general course in which they study aspects of the major engineering fields - civil, mechanical, electrical, chemical etc. Engineers with this kind of general background are well-placed to work in many industries. Most will specialize in a specific area only after graduation.



Materials Engineering

Material engineers study the properties of existing materials as well as finding new ways to work with them and to develop new materials. Material engineers work in a variety of fields. For example, the petrochemical industry requires material engineers because many modern materials, such as synthetic rubbers and plastics, are made from the by-products of petroleum refining. Other material engineers may work in the automotive or aerospace industries. Engineers in these fields are really interested in harnessing the heat resistant properties of ceramics for use in engines. Still other engineers might study all the materials related to housing- insulation, bricks, wood, cement etc.

Mathematics and Engineering

Applied mathematics plays a large role in all engineering fields. Engineers who specialise in mathematics work in areas where in-depth modelling of complex problems is required, such as current flow, turbine design and weather prediction.

Mechanical Engineering

Mechanical engineers use the principles of mathematics, material science, physics and economics to design, manufacture and maintain mechanical equipment. Our household appliances, ventilation systems, cars, ships and airplanes have been designed, tested and manufactured by mechanical engineers.

Metallurgical Engineering

Metallurgical engineers study the properties and characteristics of metals and other materials. They research, develop and monitor the processes for extracting metals from ores, develop new alloys and metals to meet specific requirements, and produce metal and non-metal products.



Mining Engineering

Mining engineers discover, extract and prepare minerals from the earth's crust to be used by manufacturing and energy industries. This involves exploration, testing, mine design and construction, as well as equipment and operations management. Mining engineers calculate the size of ore beds and determine if the ore can be extracted economically, develop plans for the entrances and work space of the mine, ventilation systems and drainage systems, supervise mine workers and ensure the safety of the workers.

Naval Architectural/Ocean Engineering

Naval architectural engineers and ocean engineers conceive, design and construct ships, offshore structures and other marine vehicles. They may work in design, shipbuilding, fisheries, transportation, national defense, or the oil and gas industry.

Oil and Gas Engineering

Oil and Gas engineers work in the exploration, recovery, development and processing of oil and gas reserves. They are involved in such things as determining the best location for drilling new wells, operating oil and gas facilities, and monitoring and forecasting reservoir performance.

Petroleum Engineering

Petroleum engineers work in the exploration, recovery, development and processing of oil and gas. Petroleum engineers are involved in such things as determining the best location for drilling new wells, operating oil and gas facilities, and monitoring and forecasting reservoir performance.

Plastics Engineering

Plastics engineers study the properties of polymer materials. They also design the machines used to manipulate and shape plastics, as well as develop new products which use plastics.

Production Engineering

Production engineers design, control, and continuously improve integrated systems of personnel, materials, machinery and money that produce goods and services. Their goal is to produce goods and to provide services of high quality in a timely, cost-efficient manner.

Software Engineering

Software engineers are trained for the specification, design, development and maintenance of software systems and products. They apply both the principles of engineering and computer science in the design of large-scale and embedded software control systems.

Space Engineering

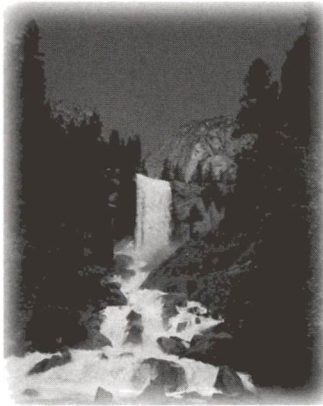
Space Engineering is an interdisciplinary study which draws upon knowledge in the areas of physics, astronomy, computer science, Earth science and atmospheric science to answer questions related to space research and exploration. Engineers in this field may take work on projects related to space-borne scientific exploration, remote sensing or satellite communications systems.

Systems Engineering

Systems engineers assist and support policy making, planning, decision making and associated resource allocation or action deployment. They study the interaction of science, organizations and the environment.

Water Resource Engineering

Resource engineers help protect water supplies and ensure that development of new sources does not disrupt natural processes. They help in pollution assessment, control of flood damage and soil erosion, and conflicts over water reserves.



Canadian Engineering Undergraduate Programs

This listing indicates undergraduate programs only. Within each program there may be one or more specializations which are of interest to applicants. In order to find out about available specializations contact the university in question.

Please note: Programs which offer co-op are marked with an asterisk (*). Programs in which internships are available are marked with a double asterisk (**). New programs that are not yet accredited by the CCPE are marked with a cross (†). The CCPE's website lists the accreditation status of all programs with links to each university at: www.ccpe.ca/ccpe.cfm?page=ceab_1998_9. This list is current as of March 2002. Readers are encouraged to access the university web sites for further updates to the information provided in this document.

University of Alberta

Faculty of Engineering

E6-050 Engineering Teaching & Learning Complex

University of Alberta

Edmonton, AB T6G 2V4

Tel: 403-492-3320 or 1-800-407-8354

Fax: 403-492-0500

E-mail: engineer@ualberta.ca

<http://www.engineering.ualberta.ca/>



Programs

Chemical Engineering*

Civil Engineering*

Computer Engineering*

Electrical Engineering*

Engineering Physics

Materials Engineering*

Mechanical Engineering*

Metallurgical Engineering*

Mining Engineering*

Petroleum Engineering*

University of British Columbia (UBC)

Faculty of Applied Science

2053-2324 Main Mall

Vancouver, British Columbia V6T 1Z4

Tel: (604) 822-6556

Fax: (604)822-2021

E-mail: Students@Apsc.ubc.ca

<http://www.apsc.ubc.ca/>



THE UNIVERSITY OF
BRITISH COLUMBIA

Programs

Bioresource Engineering

Chemical Engineering*

Civil Engineering*

Computer Engineering*

Electrical Engineering*

Engineering Physics*

Geological Engineering*

Integrated Engineering*†

Mechanical Engineering*

Metals & Materials Engineering*

Mining & Mineral Process Engineering*

The University of Calgary

Faculty of Engineering

2500 University Drive N.W.

Calgary, Alberta T2N 1N4

Tel: (403) 220-5732

Fax: (403) 284-3697

E-mail: engginfo@ucalgary.ca

<http://www.eng.ucalgary.ca>



UNIVERSITY OF
CALGARY

Programs

Chemical Engineering**

Civil Engineering**

Computer Engineering***†

Electrical Engineering**

Geomatics Engineering**

Manufacturing Engineering**

Mechanical Engineering**

Oil and Gas Engineering**

Software Engineering***†



Carleton University

Faculty of Engineering and Design

315 Robertson Hall

1125 Colonel By Drive

Ottawa, Ontario K1S 5B6

Tel: (613)520-3663 or toll free 1-888-354-4414

TDD: (613)520-3847

Fax: (613)520-3847

E-mail: liaison@carleton.ca

<http://www.eng.carleton.ca/>



Carleton
UNIVERSITY

Programs

Aerospace Engineering*

Civil Engineering*

Communications Engineering*†

Computer Systems Engineering*

Electrical Engineering*

Engineering Physics*†

Environmental Engineering*

Mechanical Engineering*

Software Engineering*†

Concordia University

Faculty of Engineering and Computer Science

1455 de Maisonneuve Blvd. West, LB 1020

Montréal, Québec H3G 1M8

Tel: (514) 848-3056

Fax: (514) 848-8646

E-mail: askencs@encs.concordia.ca

<http://www.encs.concordia.ca>



Concordia
UNIVERSITY

Programs

Building Engineering*

Civil Engineering*

Computer Engineering*

Electrical Engineering*

Industrial Engineering*

Mechanical Engineering*

Software Engineering*†

Dalhousie University

(formerly Technical University of Nova Scotia,
1981-1996, and Nova Scotia Technical College,
1907-1980)

Faculty of Engineering

PO Box 1000

Halifax, Nova Scotia B3J 2X4

Tel: (902) 494-3267

Fax: (902) 429-3011

<http://www.dal.ca/~engiwww/>



DALHOUSIE
University

Programs

Biological Engineering*

Chemical Engineering*

Civil Engineering*

Electrical Engineering**,**

Industrial Engineering*

Mechanical Engineering**,**

Metallurgical Engineering*

Mining Engineering*

École de technologie supérieure (ETS)

(Affiliated with l'Université du Québec)

1100, rue Notre-Dame Ouest

Montréal (Québec) H3C 1K3

Tel: (514) 396-8800

Fax : (514) 396-8950

<http://www.etsmtl.ca/>



Université du Québec

École de technologie supérieure

Programs

Construction Engineering*

Electrical Engineering*

Mechanical Engineering*

Automated Production Engineering*

Software Engineering**†

ETS is a French-language institution.





University of Guelph

School of Engineering

Guelph, Ontario N1G 2W1

Tel: (519) 824-4120 extension 6986

Fax: (519) 836-0227

E-mail: enginfo@uoguelph.ca

<http://www.eos.uoguelph.ca/>

Programs

Biological Engineering*

Engineering Systems & Computing*

Environmental Engineering*

Water Resources Engineering*

Lakehead University

Faculty of Engineering

Thunder Bay, Ontario P7B 5E1

Tel: (807) 346-7712 or (807) 343-8399

Fax: (807) 343-8013

E-mail: Nape@LakeheadU.ca

<http://www.lakeheadu.ca/~engwww/enghome.html>

Programs

Chemical Engineering^{*,**}

Civil Engineering^{*,**}

Electrical Engineering^{*,**}

Mechanical Engineering^{*,**}

Software Engineering[†]

UNIVERSITY of GUELPH

Lakehead

UNIVERSITY

Laurentian University

School of Engineering

Sudbury, Ontario P3E 2C6

Tel: (705) 675-1151 extension 2240

Fax: (705) 675-4862

Email: cbeausoleil@nickel.laurentian.ca

<http://www.laurentian.ca/www/engr/index.html>



Laurentian University
Université Laurentienne

Programs

Extractive Metallurgical Engineering*

Mining Engineering*

Université Laval

Faculté des sciences et de génie

Québec, Québec G1K 7P4

Tel: (418) 656-2163

Fax: (418) 656-5902

E-mail: information@fsg.ulaval.ca

<http://www.fsg.ulaval.ca> and <http://www.fsaa.ulaval.ca>



UNIVERSITÉ
LAVAL

Programs

Agricultural Engineering**

Chemical Engineering**

Civil Engineering**

Computer Engineering**

Electrical Engineering**

Engineering Physics**

Food Engineering**

Geological Engineering**

Mechanical Engineering**

Metal & Materials Engineering*

Mining & Mineral Processing Engineering*

Plastics Engineering†

Software Engineering†

Université Laval is a French-language institution.



University of Manitoba

Faculty of Engineering
Room 350 Engineering Building
15 Gillion St.
Winnipeg, Manitoba R3T 2N2
Tel: (204) 474-8315
<http://www.umanitoba.ca/Engineering>

Programs

Bio-systems Engineering
Civil Engineering*
Computer Engineering
Electrical Engineering
Industrial Engineering*
Mechanical Engineering*

McGill University

Faculty of Engineering
817 Sherbrooke Street West
Montréal, Québec H3A 2K6
Tel: (514) 398-7257
E-mail: information@engineering.mcgill.ca
<http://www.mcgill.ca/engineering>

Programs

Agricultural Engineering**
Chemical Engineering**
Civil Engineering**
Computer Engineering**
Electrical Engineering**
Mechanical Engineering**
Metallurgical Engineering*
Mining Engineering*
Software Engineering**†



UNIVERSITY
OF MANITOBA



McGill

McMaster University

Faculty of Engineering

JHE/A211

1280 Main Street West

Hamilton, Ontario L8S 4L7

Phone: (905) 525-9140 ext.24646

Fax: (905) 540-1159

E-mail: Mcmaster.ca/Eng.admit

<http://www.eng.mcmaster.ca/>



Programs

Chemical Engineering**

Civil Engineering**

Computer Engineering**

Engineering Physics**

Electrical Engineering**

Manufacturing Engineering**

Materials Engineering**

Mechanical Engineering**

Software Engineering**

*Note: Most programs have options allowing students to obtain a dual degree with Engineering.
(For example: Management or Engineering & Society)*

Memorial University of Newfoundland

Faculty of Engineering and Applied Science

St. John's, Newfoundland A1B 3X5

Tel: (709) 737-8812

Fax: (709) 737-4042

<http://www.engr.mun.ca/>



Memorial
University of Newfoundland

Programs

Civil Engineering*

Computer Engineering*†

Electrical Engineering*

Mechanical Engineering*

Ocean & Naval Engineering*

Université de Moncton

École de génie

Moncton, Nouveau Brunswick E1A 3E9

Tel: (506) 858-4300

Fax: (506) 858-4082

E-mail: leblanf@umoncton.ca

<http://www.umoncton.ca/genie/>



Programs

Civil Engineering*

Electrical Engineering*

Industrial Engineering*

Mechanical Engineering*

The Université de Moncton is a French-language institution.

University of New Brunswick (UNB)

Faculty of Engineering

PO Box 4400

Fredericton, New Brunswick E3B 5A3

Tel: (506) 453-4570

Fax: (506) 453-4569

E-mail: deaneng@unb.ca

<http://www.un.ca/departs>



Programs

Chemical Engineering^{*,**}

Civil Engineering^{*,**}

Computer Engineering^{*,**}

Electrical Engineering^{*,**}

Forest Engineering^{**}

Geological Engineering^{**}

Geomatics Engineering^{**}

Mechanical Engineering^{*,**}

Software Engineering[†]

University of Ottawa

Faculty of Engineering
161 Louis Pasteur St
PO Box 450, Stn. A
Ottawa, Ontario K1N 6N5
Tel: (613) 562-5918
Fax: (613) 562-5174
E-mail: mayrand@genie.uottawa.ca
<http://www.eng.uottawa.ca/>



Université d'Ottawa
University of Ottawa

Programs

Chemical Engineering*
Civil Engineering*
Computer Engineering*
Electrical Engineering*
Mechanical Engineering*
Software Engineering*

The University of Ottawa is bilingual institution.

École Polytechnique

(Affiliated with l'Université de Montréal)
C.P. 6079, succ. Centre-Ville
Montréal, Québec H3C 3A7
Tel: (514) 340-4929
E-mail: bac.ing.@courrier.polymtl.ca
<http://www.polymtl.ca/>



ÉCOLE
POLYTECHNIQUE
M O N T R É A L

Programs

Chemical Engineering*
Civil Engineering*
Computer Engineering*
Electrical Engineering*
Engineering Physics*
Geological Engineering*
Industrial Engineering*
Materials Engineering
Mechanical Engineering*
Mining Engineering*
Software Engineering**

L'École Polytechnique is a French-language institution.





**Université du Québec en
Abitibi-Témiscamingue (UQAT)**

445 boul de l'Université

Rouyn-Noranda, Québec J9X 5E4

Tel: (819) 762-0971 ext. 2567

Fax: (819) 797-6672

E-Mail: Pierre-Martin.Tardif@uqat.quebec.ca

<http://www.wdsa.uqat.quebec.ca/gestac/prg/7003.asp>

Programs

Electromechanical Engineering

UQAT is a French-language institution.



Université
du Québec
en
Abitibi-Témiscamingue

Université du Québec à Chicoutimi (UQAC)

Département des sciences appliquées

555 boul de l'Université

Chicoutimi, Québec G7H 2B1

Tel: (418) 545-5011 ext. 5200

<http://www.wdsa.uqac.ca>

Programs

Computer Engineering**

Electrical Engineering*†

Geological Engineering*

Mechanical Engineering*†

Unified Engineering*

UQAC is a French-language institution.



Université
du Québec
à Chicoutimi

Université du Québec à Rimouski (UQAR)

300, allée des Ursulines, C.P 3300

Rimouski, PQ G5L 3A1

Tel: 1-800-511-3382

Fax: (418) 724-1879

Email: secretariat_mig@uqar.quebec.ca

<http://www.uqar.quebec.ca>

Programs

Electromechanical Systems Engineering**

UQAR is a French-language institution.

Université du Québec à Trois-Rivières (UQTR)

École d'ingénierie

Trois-Rivières, Québec G9A 5H7

Tel: (819) 376-5011 ext. 3900

Fax: (819) 376-5152

<http://ecoleing.uqtr.ca/>

Programs

Chemical Engineering*

Computer Engineering**†

Electrical Engineering*

Industrial Engineering*

Mechanical Engineering*

UQTR is a French-language institution.



Université
du Québec
à Rimouski



Université
du Québec
à Trois Rivières





Queens University

Faculty of Applied Science
Ellis Hall, Room 101
Kingston, Ontario K7L 3N6
Tel: (613) 533-2055
Fax: (613) 533-6500
Email: Appsci@post.queensu.ca
<http://appsci.queensu.ca/>



Programs

Chemical Engineering**
Civil Engineering**
Computer Engineering†
Electrical Engineering**
Engineering Chemistry**
Engineering Physics**
Geological Engineering**
Mathematics & Engineering**
Mechanical Engineering**
Mining Engineering**

University of Regina

Faculty of Engineering
Regina, Saskatchewan S4S 0A2
Tel: (306) 585-4630
E-mail: engineering@uregina.ca
<http://www.uregina.ca/~engg/index.html>



UNIVERSITY OF REGINA

Programs

Electronic Systems Engineering*
Industrial Systems Engineering*
Environmental Systems Engineering*
Petroleum Systems Engineering†

Royal Military College of Canada (RMC)

Engineering Division

PO Box 17000, Station Forces

Kingston, Ontario K7K 5L0

Tel: (613) 541-6000 Ext. 6371

Fax: (613) 542-8612

http://www.rmc.ca/academic/eng_e.htm



Programs

Chemical Engineering

Civil Engineering

Computer Engineering

Electrical Engineering

Mechanical Engineering

Ryerson University

Faculty of Engineering and Applied Science

350 Victoria Street

Toronto, Ontario M5B 2K3

Tel: (416) 979-5000

Fax: (416) 979-5308

E-mail: Dnorthwo@acs.ryerson.ca

<http://www.ryerson.ca/>

**RYERSON
UNIVERSITY**

Programs

Aerospace Engineering**

Chemical Engineering*

Civil Engineering*

Electrical Engineering**

Industrial Engineering**

Mechanical Engineering**



University of Saskatchewan

College of Engineering
3B48 Engineering Building
57 Campus Drive
Saskatoon, Saskatchewan S7N 5A9
Tel: (306) 966-5273
Fax: (306) 966-5205
E-mail: postmaster@engr.usask.ca
<http://www.engr.usask.ca/>



Programs

Agricultural & Bioresource Engineering
Chemical Engineering
Civil Engineering
Electrical Engineering
Engineering Physics
Geological Engineering
Mechanical Engineering

Université de Sherbrooke

Faculté des sciences appliquées
Sherbrooke, Québec J1K 2R1
Tel: (819) 821-7100
Fax: (819) 821-7903
<http://www.usherb.ca/SCA>



UNIVERSITÉ DE
SHERBROOKE

Programs

Chemical Engineering*
Civil Engineering*
Computer Engineering*
Electrical Engineering*
Mechanical Engineering*

Université de Sherbrooke is a French-language institution.

Simon Fraser University

School of Engineering Science

8888 University Dr.

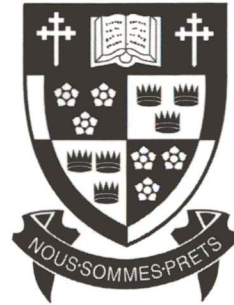
Burnaby, British Columbia V5A 1S6

Tel: (604) 291-4371

Fax: (604) 291-4951

E-mail: jones@cs.sfu.ca

<http://www.ensc.sfu.ca/>



Programs

Engineering Science

Computer Engineering*

Electronics Engineering*

Engineering Physics*

Systems Engineering*

Bio-Medical Engineering

University of Toronto

Faculty of Applied Science and Engineering

35 St George Street, Room 157

Toronto, Ontario M5S 1A4

Tel: (416) 978-0120

Fax: (416) 978-1866

E-mail: apscadm@ecf.utoronto.ca

<http://www.ecf.utoronto.ca/apsc>



Programs

Chemical Engineering**

Civil Engineering**

Computer Engineering**

Electrical Engineering**

Engineering Science**

Industrial Engineering**

Materials Engineering**

Mechanical Engineering**

Mineral Engineering**



University of Victoria

Faculty of Engineering
PO Box 3055, Stn. CSC
Victoria, British Columbia V8W 3P6
Tel: (250) 721-8678
Fax: (250) 721-8676
E-mail: bengoffice@engr.uvic.ca
<http://www.engr.uvic.ca/>

Programs

Computer Engineering*
Electrical Engineering*
Mechanical Engineering*

University of Waterloo

Faculty of Engineering
Waterloo, Ontario N2L 3G1
Tel: (519) 888-4567
E-mail: admissions@mail.eng.uwaterloo.ca
<http://www.eng.uwaterloo.ca/>

Programs

Chemical Engineering*
Civil Engineering*
Computer Engineering*
Electrical Engineering*
Environmental Engineering*
Geological Engineering*
Mechanical Engineering*
Software Engineering*†
Systems Design Engineering*



University of Western Ontario (UWO)

Faculty of Engineering Science

London, Ontario N6A 5B9

Tel: (519) 661-2130

Fax: (519) 661-3757

E-mail: reg-admissions@uwo.ca or
undergraduate@eng.uwo.ca

<http://www.engga.uwo.ca/>



The UNIVERSITY of WESTERN ONTARIO

Programs

Chemical & Biochemical Engineering**

Civil Engineering**

Computer Engineering**

Electrical Engineering**

Integrated Engineering**

Mechanical Engineering**

Software Engineering**

University of Windsor

Faculty of Engineering

Windsor, Ontario N9B 3P4

Tel: (519) 253-4232 extension 2566/2565

E-mail: registr@uwindsor.ca

<http://www.uwindsor.ca>



UNIVERSITY OF
WINDSOR

Programs

Civil Engineering*

Electrical Engineering*

Environmental Engineering*

Industrial Engineering*

Mechanical Engineering*



York University

Faculty of Pure and Applied Science
4700 Keele St.

Toronto, Ontario M3J 1P3

Tel: (416) 736-2100 ext. 30757

Fax: (416) 736-5804

E-mail: sciadmit@yorku.ca

<http://www.eng.yorku.ca/>



UNIVERSITÉ
YORK
UNIVERSITY

Programs

Computer Engineering[†]

Engineering Physics[†]

Geomatics Engineering[†]

Space Engineering[†]

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Academic Requirements for Admission

Admission to undergraduate engineering programs is very competitive. The following are, therefore, minimum admissions requirements. Applicants with higher marks will have a better chance of admission. It is always a good idea to contact the institutions in which you are interested to ask about admissions requirements.

Please note that students from Nunavut should contact the admissions office of the university in which they are interested.

Alberta/Northwest Territories

Alberta Applicants	Applicants from Quebec	Applicants from other Provinces or Territories
Grade 12 diploma English 30 Chemistry 30 Math 30 or Pure Math 30 Math 31 Physics 30	Successful completion of the first year of CEGEP program (12 academic credits) The following five subjects are necessary: • 2 courses numbered in the English literature 603 series • 2 courses of: Algebra 201-101, 201-105, 201-205 • Calculus 201-103 and 201-203 • Physics 2 courses of 203-102, 203-201, 203-111, 203-301 • 2 courses of Chemistry 202-101 and 202-201 or 202-102 and 292-112 or 202-211	PEI English 621 Math 611 Math 621 Physics 621 Chemistry 621 Newfoundland 1 of English 3201, 3202, 3211 Calculus 4225 Math 3200 or Advanced Math 3201 Physics 3204 Chemistry 3202 All other provinces & territories See home university requirements



British Columbia/Yukon

Applicants from BC	Applicants from Quebec	Applicants from other provinces and territories
<p>Grade 12 diploma English 11 and 12 Chemistry 11 Mathematics 11 and 12 Physics 11 and 12 Social studies 11 A language 11 Chemistry 12 or an approved academic 12 subject</p> <p>Minimum average: 80% overall in level 12 courses</p>	<p>Must have completed one year of an academic diploma program of a CEGEP with an overall average of 75% or a completed CEGEP diploma with an overall average of 68%</p>	<p>Completion of secondary school graduation is mandatory Minimum average of 67% or equivalent is necessary</p> <p>Courses same as home university requirements; for PEI see Alberta admissions</p>

Manitoba

Applicants from Manitoba	Applicants from other Provinces or Territories
<p>Route 1 direct entry a minimum average of 85% in Mathematics, Chemistry, and Physics at the 40S level</p> <p>Route 2 begin studies with a year of personal and academic exploration Required courses in Mathematics, Physics, Chemistry, Computer Science and English</p> <p>Minimum average of 63% over three different subjects from the list of Academic Subjects approved for Selection</p>	<p>Students who are not residents of Manitoba should contact the university Admissions office for out of province requirements.</p>

Students who do not meet admissions requirements at the time of application should contact the University of Manitoba ENGAP program. See page 43 for more information.



New Brunswick

Applicants from New Brunswick	Applicants from Quebec	Other provinces and territories
<p>1 credit in English 122 1 credit in Math 112 1 credit in Advanced Math 120 1 credit in Physics 122 1 credit in Chemistry 122 1 elective</p> <p>Minimum average: 70% overall</p>	<p>Require the following high school courses: English 2 Maths (one of 522 or 532) Physics 522 Chemistry 562 1 elective</p> <p>Minimum average: 70%</p>	<p>Nova Scotia and Prince Edward Island: Require the same course requirements as the home university with a minimum average of 70% and one elective.</p> <p>Other provinces and territories: See home university course requirements</p> <p>Minimum average: 70%</p>

Newfoundland

Applicants from Newfoundland	Applicants from other Provinces or Territories
<p>Admission to the Faculty of Engineering and Applied Science is on the basis of a competition for a limited number of places. The primary criterion used in reaching decisions on applications for admission is the Admission Committee's judgement of the likelihood of an applicant succeeding in the program, as well as a high school diploma with an emphasis in math and science.</p>	<p>Students who are not residents of Newfoundland should contact the Admissions office in question for out of province requirements.</p>



Nova Scotia

Applicants from Nova Scotia	Applicants from other Provinces or Territories
<p>English Math 441 or equivalent Physics Chemistry</p> <p>Minimum average: 65% in above classes</p>	<p>Students who are not residents of Nova Scotia should contact the Admissions office in question for out of province requirements.</p>

Ontario

Applicants from Ontario	Applicants from Quebec	Applicants from other provinces and territories
<p>Completion of high school diploma required</p> <p>6 Ontario Academic Credits are required: 1 credit in English or French 1 credit in Calculus 1 credit in Algebra & Geometry 1 credit from Physics 1 credit from Chemistry 1 additional credit</p> <p>minimum average: 70-75% overall</p>	<p>The completion of at least 12 academic CEGEP credits is required for admission. They are the following: 1 credit in English 1 credit in Mathematics (210-101) 1 credit (201-103) 2 credits from Physics 1 credit from Chemistry (202-101) or Biology (101-301) *Note: The 12 academic courses exclude technical & physical education courses</p> <p>Applicants completing the DEC with 24 academic credits may be considered for admission to year 1 or year 2 depending on the CEGEP program.</p>	<p>See home province university requirements</p>

Note: Because of changes to the Ontario high school system in the 2001-2002 academic year, it is best to check specific admissions requirements with your institution of choice. You may also look online at the Ontario University Application Centre, <http://www.ouac.on.ca>.





Quebec

Applicants from Quebec	Applicants from other provinces and territories
Successful completion of the Québec Diplôme d'études collégiales (DEC) including the following courses: Math 103, 105 203 Physics 101, 201, 301 Chemistry 101	Applicants must hold a High School diploma with an emphasis on maths and sciences. Course requirements are the same as at home province university.

Students who have completed a 3-year technical DEC in an appropriate field should contact the university in which they are interested for information on admissions requirements.

Saskatchewan

Applicants from Saskatchewan	Applicants from other provinces and territories
Grade 12 diploma with the following courses: English A30 English B30 Algebra 30 or Math B30 Geo-Trig 30 or Math C30 Chemistry 30 Physics 30 One approved elective numbered 30 minimum admission average is 70%	Students who are not residents of Saskatchewan should contact the Admissions office in question for out of province requirements.



Support for Aboriginal Students

Many Canadian universities have an office for Aboriginal students on campus. These offices offer a number of services, including social and academic support. You should contact the university you are interested in to see what services they offer. Certain universities have developed comprehensive programs to support Aboriginal students in Engineering and Sciences. These institutions are listed below.

University of Alberta

The Faculty of Engineering at the University of Alberta holds places in its programs for Aboriginal applicants. These spaces are filled by students who meet general admissions requirements for undergraduate engineering programs.

For applicants who have not completed prerequisite high school courses or whose average is not competitive, the university offers a transition year program. The transition year offers an introduction to physics and math courses before commencing studies within a specific engineering specialty. In addition, the year is designed to allow students to become more comfortable with the demands and realities of university life and studies.

In order to apply to the Transition Year Program, you must be an Aboriginal applicant, 18 or older, and have a minimum average of 60%.

For information contact:
Native Student Services Office
2-400 Student's Union Building
University of Alberta
Edmonton, AB T6G 2E1
Tel: (403) 492-5677 Fax: (403) 492-6701



University of British Columbia

The University of British Columbia offers a summer program called Synalla. Synalla is an initiative designed to give Aboriginal high school students with good potential for post-secondary studies a leg up in the year before they apply to university. It is a five-week, on-campus, summer program where students study English, Math, Ethnoscience, First Nations Studies and Career Path. The English and Math Courses provide a review of the grade 11 BC curricula and a solid introduction to the grade 12 curricula. It should be noted that Synalla has a general focus and does not guarantee admission into the university.

For information contact:

James Andrew

UBC

#188-1985 West Mall

Vancouver, BC V6T 1Z2

Tel: (604) 822-5613 Fax: (604) 822-8944

Email: jandrew@interchange.ubc.ca



The Faculty of Applied Science at UBC invites inquiries and applications from Aboriginal students. Those students who do not meet the competitive admission average in Applied Science, but who do meet the university-wide academic minimum of 67%, will be considered for entry into the Faculty on a case-by-case basis.

Concordia University

The Faculty of Engineering and Computer Science at Concordia University runs a Native Access to Engineering Program which is different from other programs in the country. This program provides a number of services including:

- Curriculum material to support science and math teachers in Aboriginal schools.
- A clearing house of information with respect to undergraduate engineering programs in Canada and Aboriginal participation in these programs.
- Professional development opportunities for educators from Aboriginal schools.

For information contact:

Corinne Mount Pleasant Jetté or Dawn Wiseman

1455 de Maisonneuve Blvd. West LB #1015

Montreal, PQ H3G 1M8

Phone: (514) 848-3693 or 7847

Fax: (514) 848-4596

Email: corinne@encs.concordia.ca or dawn@encs.concordia.ca

<http://www.nativeaccess.com>

Lakehead University

The Native Access Program for Engineering (NAPE) provides pre-engineering education to mature Aboriginal students who have not completed the secondary school requirements for entry into an undergraduate engineering program. It also provides support for all Aboriginal students registered in the Faculty of Engineering.

NAPE provides academic, cultural and social support during all stages of a student's engineering education. Stage one is a six week summer program introducing concepts in mathematics, science and communications, along with an orientation course to make students feel comfortable in their new surroundings. It is followed by an academic year of courses to prepare students for entry into the study of engineering. In stage two, students enter an engineering technology program in Chemical, Civil, Electrical, Mechanical or Software Engineering. In stage three, students can enter a post-diploma engineering degree program to obtain a Bachelor of Engineering in their chosen discipline.

For information contact:

NAPE

Faculty of Engineering

Lakehead University

Thunder Bay, Ontario

P7B 5E1

Tel: (807) 346-7712 Fax: (807) 343-8013

Email: NAPE@lakeheadu.ca

<http://lakeheadu.ca/~engwww/enghome.html>

University of Manitoba

The Engineering Access Program (ENGAP) provides academic, personal, social and financial support to Aboriginal students within the Engineering Faculty. ENGAP also provides assistance with summer job and career placement, housing and child care, as well as transitional courses to assist in adjusting to university life.



For information contact:

Engineering Access Program

Faculty of Engineering

University of Manitoba

Winnipeg, Manitoba R3T 5V6

Email: bmathia@cc.umanitoba.ca

Tel: (204) 474-9872 or Toll Free: 1-800-432-1960
ext. 9872

Fax: (204) 474-7518

Université du Québec à Chicoutimi

The Centre des études amérindiennes at the Université du Québec à Chicoutimi (UQAC) offers academic and research support to students enrolled at the university.

Under the direction of two governing boards, one for teaching and the other for management, the Centre develops training programs, provides teaching, and undertakes research in close collaboration with Aboriginal communities, the results of which are published in *Tekouerimat*. In addition, the Centre promotes science and engineering to French-speaking, Aboriginal high school students through a summer science camp held at the university.

For more information contact:

Huguette Bouchard

Centre d'études amérindiennes

UQAC

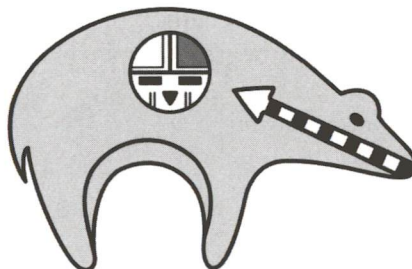
655 boul. de l'Université

Chicoutimi, Québec

G7H 2B1

Tel: 418-545-5011, extension 2323

Fax: 418-545-5012



University of Regina

The University of Regina Faculty of Engineering, in partnership with the Saskatchewan Indian Federated College (SIFC), offer a 4-year program leading to a Bachelor of Applied Science (BASc) in Environmental Health and Science. This program emphasizes traditions and culture while providing First nations students with the opportunity to acquire the necessary leadership skills and knowledge needed to address problems in the areas of environmental health and science.

For more information, please contact:

Co-ordinator

Environmental Health and Science Program

Saskatchewan Indian Federated College

Room 118 College West Building

University of Regina

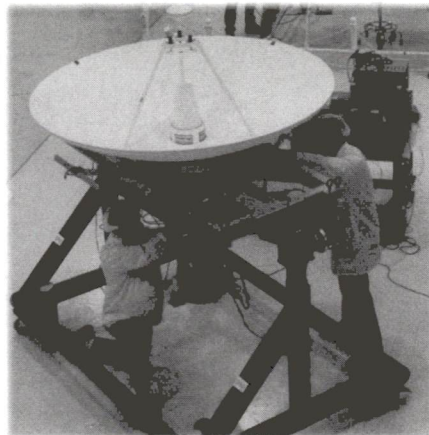
Regina, Saskatchewan S4S 0A2

Phone: (306) 546-8548

Fax: (306) 546-8413

E-mail: hmichell@sifc.edu

<http://www.sifc.edu/science/enhs.htm>



University of Saskatchewan

The University of Saskatchewan offers a variety of support services for Aboriginal students through its Cameco Access Program for Engineering and Science (CAPES).

The university partners with Northern Saskatchewan educational institutions (most notably Northlands College and NORTEP/NORPAC) to offer transition programs for students wanting to pursue a science-based university education. These programs have prerequisite courses in math and sciences, as well as instruction in study skills and time management. Students are supported with tutors and counseling.

Other CAPES activities are web-based Math Readiness and Math Foundations courses, an annual conference on Northern Math/Science Education, and the promotion of math and science in northern communities.

For information contact:

CAPES

College of Engineering

University of Saskatchewan

57 Campus Drive

Saskatoon, Saskatchewan

S7N 5A9

Tel: (306) 966-2562

Fax: (306) 966-5205

Email: capes@engr.usask.ca



University of Toronto

The Faculty of Applied Science and Engineering at the University of Toronto offers Aboriginal students support through the Amik Engineering Program. Amik provides counseling, financial aid and personal academic tutors to students, particularly during the challenging transition period at the beginning of an undergraduate degree.

For information contact:

The Amik Engineering Program

Faculty of Applied Science and Engineering

University of Toronto

35 George St.

Toronto, Ontario

M5S 1A4

Financial Assistance

There is a great deal of financial assistance available for students across Canada. There are many forms of financial aid, such as scholarships, bursaries, awards and loans. While loans have to be repaid, scholarships, bursaries and awards do not.

Scholarships are tuition credits awarded by institutions, agencies or individuals. **Scholarships** can be based on academic excellence, sport performance or community service. Criteria for receiving a scholarship may also include membership or affiliation with a group, organization or community, or financial need. **Bursaries** are grants awarded after school has started and are based on you proving financial need and the ability to successfully continue post-secondary education. **Awards** may be cash, books, or certificates based on demonstrated excellence at something or some personal achievement. **Student loans** are funds borrowed from a bank, to be repaid on a calculated rate of interest. Repayment usually begins six months after graduation.

The scholarships and awards listed below are specific to Aboriginal students. Many other local, provincial, national and international awards are available. Information should be available from your guidance counselor and/or your community Band Council, Education Council or Treaty office.

Many communities provide funding for students who are pursuing post-secondary education. Again, information should be available from your guidance counselor and/or your community Band Council, Education Council or Treaty office.

If you have access to the World Wide Web, the Native Access to Engineering Programme has links to good sites for scholarships, bursaries, awards and student loans. You can find the information at <http://www.nativeaccess.com/education/financial.html>.

Petro Canada Education Award Program for Native Students

Open to Native students enrolled in a post-secondary institution studying the oil and gas industry, engineering or business management. Value of award is \$5,000.

Contact:

Roy Conningham

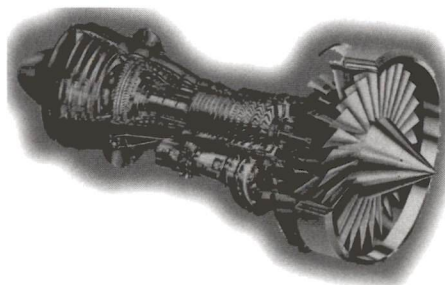
P.O Box 2844

Calgary, AB

T2P 2E3

Tel: (403) 235-4274

Fax: (403) 273-6501





Xerox Aboriginal Scholarship Program

Open to any students enrolled in any technology program at the post-secondary level. Value of award is \$3000.

Contact:

5650 Yonge St.

North York, Ont.

M2M 4G7

Tel: (416) 229-3769

Fax: (416) 733-6087

CN Native Educational Awards Program

Open to full-time students enrolled in engineering, computer programming and market analysis.

Contact:

Manager, Employment Equity

Native Educational Awards Program

Canadian National

935 de la Gauchetière St. West

Montreal, PQ H3B 2M9

Tel: (514) 399-7676

CASTS Scholarships

Available to students pursuing academic programs in the sciences, engineering, health-related fields, natural resources, math and science secondary education. Programs of study must be two years or longer. There are 2 awards of \$1000 and 5 awards of \$200.

Contact:

CASTS Scholarships Committee

Treaty 7 Tribal Council

310-6940 Fisher Rd., S.E

Calgary, AB T2H 0W3

Tel: (403) 258-1775

Fax: (403) 258-1811

E-mail: casts@mail1.treaty7.org



Royal Bank Native Student Awards

Available to full-time students enrolled in a discipline related to banking, such as economics, computer science or business. Amount given is \$4000 per year in addition to potential summer or post-graduate employment.

Contact:

Natasha Kassim

Recruitment Strategy and Workforce Diversity

RBC Banking, Human Resources

330 Front St. W., 10th floor

Toronto, Ontario M5V 3B7

Tel: (416) 348-6947 Fax: (416) 348-6960

E-Mail: natasha.kassim@rbc.com

<http://rbcroyalbank.com/careers/students/scholarships.htm>



Ontario Power Generation Award Program

John Wesley Beaver Memorial Awards

Presented to one male and one female Aboriginal student enrolled in targeted post-secondary programs and selected by the Ontario Hydro Native Circle. This award is only open to Ontario residents. The value of the award is one year of tuition.

Contact:

Ontario Power Generation

Student Awards

Corporate Human Resources

700 University Avenue, H5-G26

Toronto, ON M5G 1X6

Phone: (416) 592-6783 Fax: (416) 592-4190

BC Hydro Aboriginal Scholarship Program

Open to students who have already completed their first year of studies at a post-secondary institution. Student must be in good academic standing (at least a 75% average) and must be supported by a British Columbia First Nation or Native Organization.

Contact:

Outreach Programs

BC Hydro

16th floor, 333 Dunsmuir St.

Vancouver, BC V6B 5B3

Tel: (604) 623-3552

Fax: (604) 623-3614

Manitoba Hydro Employment Equity Program

Open to students entering first-year engineering or computer science programs at selected post-secondary institutions in Manitoba, such as University of Manitoba, Brandon University, Red River Community College and Keewatin Community College.

Contact:

Employment Equity

Manitoba Hydro

P.O. Box 815

Winnipeg, Manitoba R3C 2P4

Tel: (204) 474-4560

Fax: (204) 204-4868

Ted Trindall Memorial Scholarship

Available to Aboriginal students of the North West Territories enrolled in full-time studies of their choice at the post-secondary level.

Contact:

Chairman

Ted Trindall Memorial Scholarship Fund

c/o P.O. Box 1374

Yellowknife, NWT X1A 2P1

Tel: (403) 240-6304

Fax: (403) 240-6655



Casino Regina Post-Secondary Scholarships

Open to Saskatchewan residents who are enrolled full-time at a Saskatchewan post-secondary institution within the field of computer and electronic technology, communications or administration. Value of award is \$500 for certificate/diplomas programs and \$1000 for university programs.

Contact:

Casino Regina Scholarship Committee, 3rd Floor

1880 Saskatchewan Dr.

Regina, Saskatchewan S4P 0B2

Home Oil Company Limited Aboriginal Scholarship Program

Open to Aboriginal students pursuing studies in one of the following areas: engineering, geology/geophysics, computer science, technology and commerce. Value of award is \$2000.

Contact:

Aboriginal Scholarship Program

Human Resources Department

Home Oil Company Ltd.

1600 Home Oil Tower

324 8th Avenue

Calgary, Alberta

T2P 2Z5

Tel: (403) 232-7100

Fax: (403) 232-7221



Weyerhaeuser Educational Awards Program

Awarded to Aboriginal students majoring in engineering, science, computer science or accounting. Value of award is \$2500.

Contact:

Bursary Program Co-ordinator

Weyerhaeuser Canada, Ltd.

P.O Box 1900

Prince Albert, Saskatchewan

S6V 6J9

Tel: (306) 763-0655

Fax: (306) 922-1371

Syncrude Aboriginal Education Awards Program

Awarded to Aboriginal students attending post-secondary programmes related to the oil-sands industry. Value of award is \$2000.

Contact:

Aboriginal Scholarship Program

Recruiting and Workforce Planning

P.O Bag 4023, MD 3200

Fort McMurray, Alberta

T9H 3H5

Tel: (780) 790-6440

Fax: (780) 790-6186



For more information pertaining to any of the following nine awards, contact:
National Aboriginal Achievement Foundation
Suite 33A, 70 Yorkville Avenue
Toronto, ON M5R 1B9
Tel: 1-800-329-9780
<http://www.naaf.ca>

National Aboriginal Achievement Foundation Scholarship

Presented to students enrolled in engineering, sciences, law, finance, and business. Based on creativity, innovation, dedication and commitment to studies.

Pat Donais Amber Energy Inc. Aboriginal Education Award

Open to students pursuing education in business or science, with preference given to students from communities where Amber is present.

Shell Canada Aboriginal Scholarship Program

Available to students enrolled in engineering, science or business.

CIBC Achievers

Available to Aboriginal students in any field of study. Students must be enrolled in a post-secondary program at recognized Canadian technical institutes, CEGEPs, colleges and universities.

Ontario Aboriginal Partnerships Recognition Scholarship

Available to students enrolled in science and technology or business programs at an accredited Ontario technical institute.

The Imasco Aboriginal Education Award

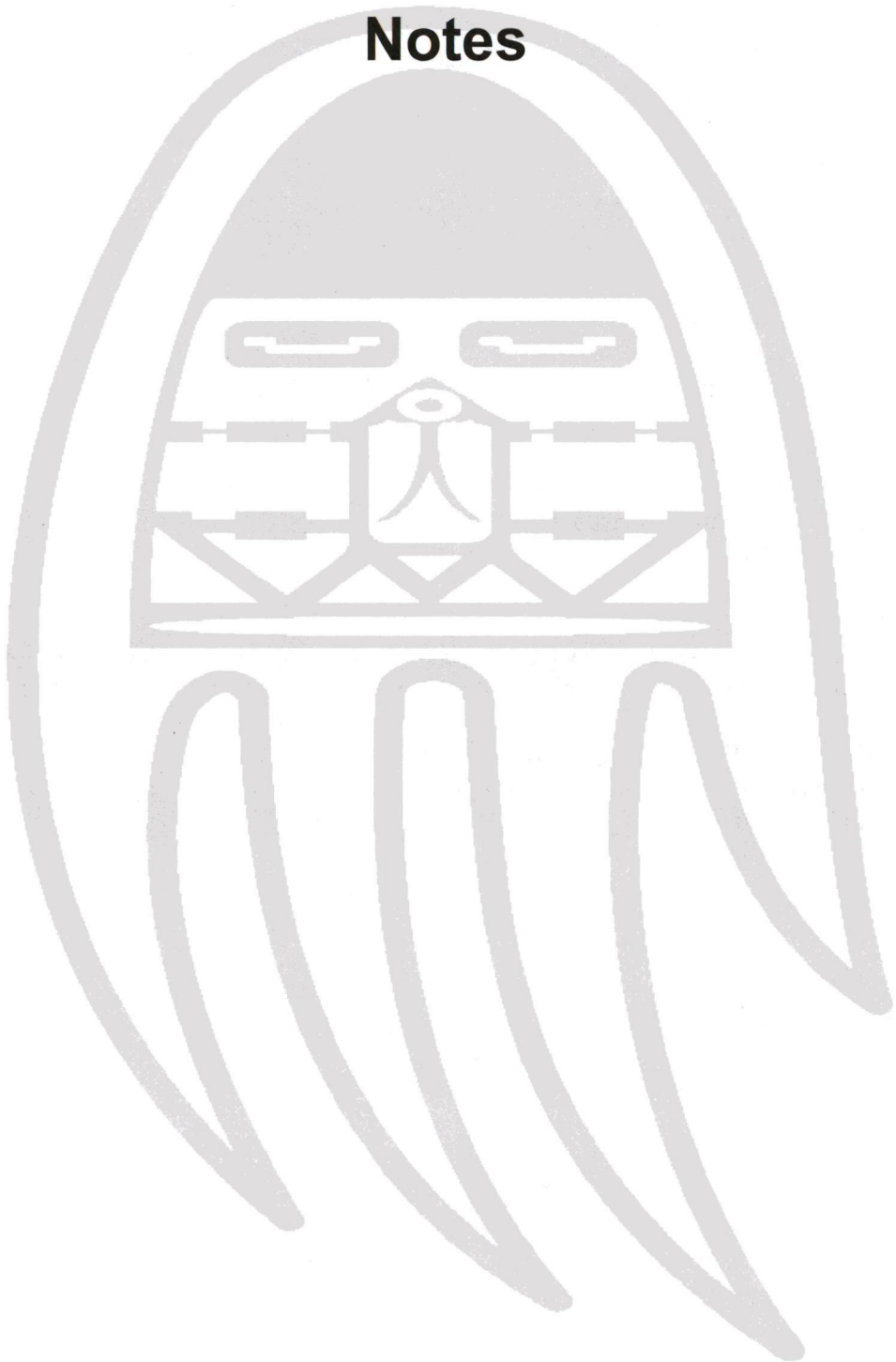
Available to students in every region of Canada pursuing a post-secondary education in any field of study.

The Suncor Energy Aboriginal Awards

Open to all Aboriginal students pursuing post-secondary education, however, preference will be given to students from Northern Alberta, especially those students living within the Regional Municipality of Wood Buffalo



Notes



Notes

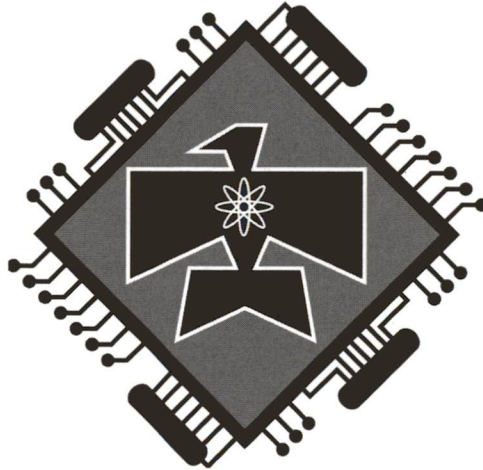


N'ya: weh

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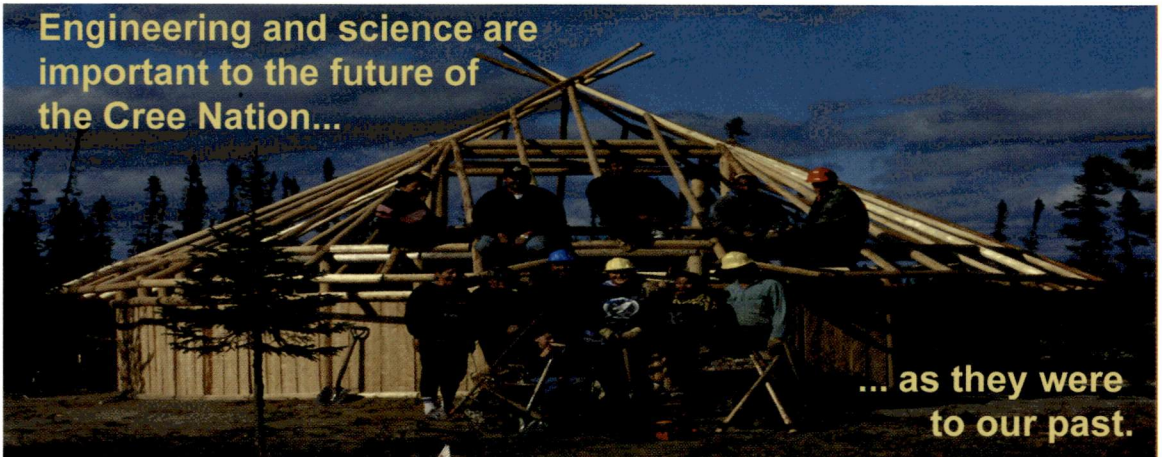
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Engineering and science are
important to the future of
the Cree Nation...



... as they were
to our past.



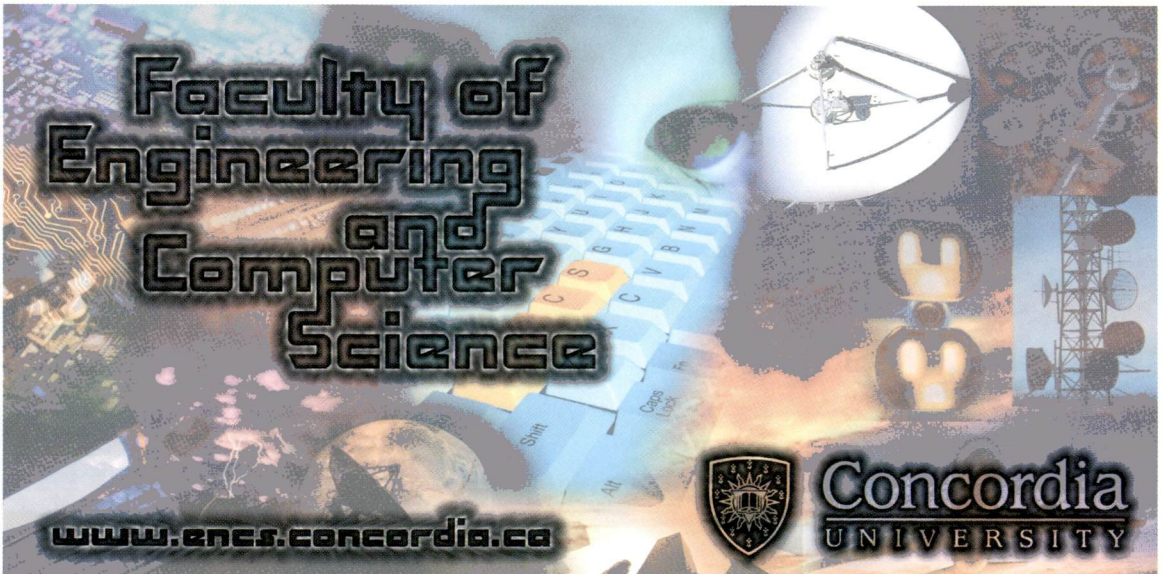
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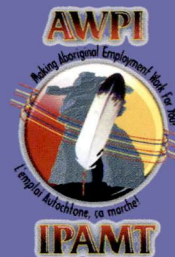
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<http://www.nativeaccess.com>